

R e m a r k s

Claims 1-34 are pending in the application.

Claims 4, 17 and 26 are objected to.

Claims 20-23 and 29-33 have been objected to as containing allowable subject matter, yet dependent upon rejected base claims.

Claims 8-13, 15-16, 22 and 31 are rejected under 35 U.S.C. 112, ¶2, as being indefinite.

Claims 1-3, 14, 24-25 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Roletto (U.S. Patent Application Publication 2004/0221190, hereinafter Roletto).

Claims 4, 7, 17-18, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Berg (US Patent 5,872,911, hereinafter Berg).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Guibellot (US Patent 7,024,580, hereinafter Guibellot).

Claims 6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Dev (U.S. Patent 5,261,044, hereinafter Dev).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Berg and in further view of Guibellot and Dev.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Berg and in further view of Dev.

Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in

the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewritten to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Claim Objections

Claims 4, 17 and 26 are objected to. First, the Examiner asserts that the claims should read "instance where said network degradation event" to avoid confusing the event with brink of failure events. Second, the Examiner asserts that the use of the phrase "at least one of a critically defined network functionality" implies that the phrase will be followed by an enumeration of a group having more than one element. Third, the Examiner asserts that use of the phrase "critically defined network functionality" is improper because "it implies that the act of defining was performed in a critical manner." The rejection is traversed.

With respect to the "where said event" phrase, Applicants have herein amended the claims to clarify the term identified by the Examiner.

With respect to the "at least one of a critically defined network functionality" phrase, Applicants have herein amended the claims to clarify the term identified by the Examiner.

With respect to the “critically defined network functionality” phrase, Applicants submit that the limitation is clear. Since networks vary in many respects, functionality considered to be critical in different networks may vary. Thus, different types of network functionality may be defined as being critical. The limitation clearly does not imply that the act of defining was performed in a critical manner. Rather, one skilled in the art would clearly understand the phrase to mean that the network functionality is defined as being critical.

Therefore, the objections should be withdrawn.

Allowable Subject Matter

Claims 9-13, 15-16, 20-23 and 29-33 are objected to as containing novel subject matter yet being dependent on rejected base claims. Applicants thank the Examiner for indicating allowable subject matter; however, Applicants respectfully maintain that independent claims 1, 17, and 24, from which claims 9-13, 15-16, 20-23 and 29-33 depend, are allowable.

Rejection Under 35 U.S.C. 112, ¶2

Claims 8-13, 15-16, 22 and 31 are rejected under 35 U.S.C. 112, ¶2, as being indefinite. The rejection is traversed.

Claim 8:

With respect to claim 8, Applicants have herein amended claim 8 to correct antecedent basis.

Thus, Applicants submit that claim 8 is definite and satisfies the requirements of 35 U.S.C. 112, ¶2, and is patentable thereunder.

Claims 12, 22, 31:

With respect to claims 12, 22, and 31, the Examiner asserts that the claims are potentially non-limiting since the claims are only applicable “when the network degradation event is a breach-of-security event.” Applicants respectfully disagree.

Applicants submit that each of these claims clearly limits the respective claim from which it depends. Claim 12 depends from claim 9. If the instance defined in claim 12 (i.e., the network degradation event is associated with a BOS event) were to occur in claim 9, the steps of categorizing, determining, and displaying are not performed because these limitations are not defined in claim 9. By contrast, if the instance defined in claim 12 (i.e., the network degradation event is associated with a BOS event) were to occur in claim 12, the steps of categorizing, determining, and displaying are performed because these limitations are defined in claim 12. Thus, claim 12 clearly limits claim 9 and, therefore, is not potentially non-limiting.

As such, Applicants respectfully submit that claim 12 is not potentially non-limiting. Similarly, for at least the reasons discussed herein with respect to claim 12, Applicants respectfully submit that claims 22 and 31 also are not potentially non-limiting.

Thus, Applicants submit that claims 12, 22, and 31 are definite and satisfy the requirements of 35 U.S.C. 112, ¶2, and are patentable thereunder.

Claim 17:

With respect to claim 17, the Examiner asserts that the limitation of “defining said network degradation event as a brink of failure (BOF) event in an instance where said event is at least one of” is indefinite. Applicants respectfully disagree.

Applicants’ claim 17 clearly defines the condition(s) under which a network degradation event is defined as a BOF event. Although Applicants believe that claim 17, as originally presented, is definite, in the interest of furthering the case Applicants have herein amended claims 4, 17, and 26 to clarify the conditions under which a network degradation event may be defined as a BOF event.

Therefore, the rejection should be withdrawn.

Rejection Under 35 U.S.C. 102

Claims 1-3, 14, 24-25 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Roletto (U.S. Patent Application Publication 2004/0221190, hereinafter Roletto). The rejection is traversed.

Roletto discloses a system for detecting network intrusions and other conditions in a network. The system includes collector devices disposed to collect data and statistical information on packets sent between nodes of a network. An aggregator device is disposed to receive data and statistical information from the collector devices. The aggregator device produces a connection table that maps each node of the network to a record that stores information about traffic to or from the node. The aggregator runs processes that determine network events from aggregating of anomalies into network events. (Roletto, Abstract).

Roletto, however, fails to teach or suggest each and every limitation of Applicants' claim 1. Specifically, Roletto fails to teach or suggest at least the limitation of "wherein if said network degradation event is defined as a BOF event a determination is made as to whether said BOF event also causes a BOS event," as claimed in Applicants' claim 1.

Rather, Roletto merely describes different events which may be detected from anomalies in the connection table produced by the aggregator device. Specifically, Roletto states that anomalies in the connection table can be identified as "...events including denial of service attacks, unauthorized access attempts, scanning attacks, worm propagation, network failures, addition of new hosts, and so forth." (Roletto, Para. 0010).

Roletto is devoid of any teaching or suggestion of identifying an event as a brink of failure (BOF) event. In the Office Action, the Examiner cites a specific portion of Roletto, asserting that the cited portion of Roletto discloses defining an event as a brink of failure event. (Office Action, Pg. 7). The cited portion of Roletto, however, is devoid of any teaching or suggestion of defining an event. Rather, the cited portion of Roletto merely describes how denial of service attacks may be executed, such as sending a victim more data than it can handle or randomly spoofing source addresses. A description of how a denial of service may be executed, as taught in Roletto, simply does not teach or suggest defining an event as a brink of failure event.

Similarly, Roletto is devoid of any teaching or suggestion of identifying an event as a breach of security (BOS) event. In the Office Action, the Examiner cites a specific portion of Roletto, asserting that the cited portion of Roletto discloses defining an event as a breach of security event. (Office Action, Pg. 8). The cited portion of Roletto,

however, is devoid of any teaching or suggestion of defining an event. Rather, the cited portion of Roletto merely describes how denial of service attacks may be executed, such as sending a victim more data than it can handle or randomly spoofing source addresses. Although Roletto describes security-related event, i.e., a denial of service attack, Roletto simply does not teach or suggest defining the denial of service attack as a breach of security event. A description of how a denial of service may be executed, as taught in Roletto, simply does not teach or suggest defining an event as a breach of security event.

Thus, since Roletto fails to teach or suggest defining an event as a brink of failure (BOF) event or defining an event as a breach of security (BOS) event, Roletto must also fail to teach or suggest any correlation between a BOF event and a BOS event. Therefore, Roletto fails to teach or suggest a determination as to whether an event defined as a BOF event also causes a BOS event, as claimed in Applicants' claim 1.

Anticipation requires, in a single prior art reference, disclosure of each and every element of the claimed invention, arranged as in the claim. Roletto fails to disclose each and every element of the claimed invention, as arranged in independent claim 1. Namely, Roletto fails to teach or suggest at least the limitation of "wherein if said network degradation event is defined as a BOF event a determination is made as to whether said BOF event also causes a BOS event," as claimed in Applicants' claim 1.

As such, independent claim 1 is not anticipated by Roletto and is patentable under 35 U.S.C. 102. Independent claims 24 and 34 recite relevant limitations similar to those recited in independent claim 1 and, as such, for the same reasons as discussed above, these independent claims also are not anticipated by Roletto and are patentable under 35 U.S.C. 102. Furthermore, since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Roletto.

Therefore, Applicants' claims 1-3, 14, 24-25 and 34 are allowable over Roletto. under 35 U.S.C. 102. The Examiner is respectfully requested to withdraw the rejection.

Rejection Under 35 U.S.C. 103(a)

Claims 4, 7, 17-18, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Berg. Claim 5 is rejected under 35 U.S.C. 103(a) as

being unpatentable over Roletto in view of Guibellot. Claims 6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Dev. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Berg and in further view of Guibellot and Dev. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roletto in view of Berg and in further view of Dev.

The rejections are traversed.

Claims 17-18

Roletto and Berg, alone or in combination, fail to teach or suggest Applicants' invention of claims 17-18, as a whole.

As described herein with respect to claim 1, Roletto fails to teach or suggest identifying an event as a brink of failure (BOF) event or identifying an event as a breach of security (BOS) event, and, also fails to teach or suggest any correlation between a BOF event and a BOS event. Therefore, Roletto fails to teach or suggest a determination as to whether an event defined as a BOF event also causes a BOS event, as claimed in Applicants' claim 1. Similarly, Roletto must also fail to teach to suggest "determining whether said BOF event also causes a BOS event," as claimed in Applicants' claim 17.

Furthermore, Berg fails to bridge the substantial gap between Roletto and Applicants' claim 17.

Berg discloses use of a service impact analysis to provide a telecommunications network carrier with improved real-time information on network failures. The system provides a customer-oriented view, rather than the traditional network-oriented view. The system monitors a network for faults by collecting fault data. The system assesses the fault data to determine the actual service impact at a particular instant in time and the likely cause of the fault. The system also predicts future service impact based on collected historical data of the network. The system associates equipment failures with actual and potential call traffic impact. (Berg, Abstract).

Berg, however, alone or in combination with Roletto, fails to teach or suggest Applicants' claim 17, as a whole. Namely, Berg, alone or in combination with Roletto, fails to teach or suggest at least the limitation of "determining whether said BOF event also causes a BOS event," as claimed in Applicants' claim 17.

Applicants respectfully submit that although Berg describes filtering collected data, correlating the filtered data to determine relationships between alarms, and determining service impact from the correlated data, Berg is devoid of any teaching or suggestion of determining whether a brink of failure (BOF) event causes a breach of security (BOS) event. Rather, with respect to filtering Berg merely states that alarm severity levels may be associated with the imminence and/or magnitude of service impact, with respect to correlation Berg merely states that logical rules or hardcoding may be used to correlate alarms, and with respect to determining service impact Berg merely states that a fault is associated with a particular network outage. (Berg, Col. 3 – Col. 5).

The association of alarm severity levels to imminence or magnitude of service impact, as taught in Berg, does not teach or suggest determining whether a BOS event causes a BOS event, as claimed in Applicants' claim 17. Similarly, the other teachings of Berg with respect to correlation and determining service impact fail to teach or suggest determining whether a BOS event causes a BOS event, as claimed in Applicants' claim 17. Berg is devoid of any teaching or suggestion of any correlation between a brink of failure (BOF) event and a breach of security (BOS) event.

As such, Berg, alone or in combination with Roletto, fails to teach or suggest at least the limitation of "determining whether said BOF event also causes a BOS event," as claimed in Applicants' claim 17. Therefore, Roletto and Berg, alone or in combination, fail to teach or suggest Applicants' claim 17, as a whole.

The test under 35 U.S.C. 103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Thus, it is impermissible to focus either on the "gist" or "core" of the invention. Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. Roletto and Berg, alone or in combination, fail to teach or suggest Applicants' claim 17, as a whole.

As such, independent claim 17 is patentable over Roletto in view of Berg under 35 U.S.C. 103(a). Furthermore, claims 18 depends from independent claim 17 while adding additional elements. Therefore, claim 18 also is non-obvious and is patentable

over Roletto in view of Berg under 35 U.S.C. 103 for at least the same reasons discussed above in regards to independent claim 17.

Claims 4-8, 19, 26-28

Each of these grounds of rejection applies only to dependent claims, and each is predicated on the validity of the rejection under 35 U.S.C. 102 given Roletto. Since the rejection under 35 U.S.C. 102 given Roletto has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that the additional references supply that which is missing from Roletto to render the independent claims anticipated, these grounds of rejection cannot be maintained.

Therefore, Applicants' claims 4-8, 17-19 and 26-28 are allowable over Roletto, Berg, Guibellot and Dev alone or in combination under 35 U.S.C. 103(a).

Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

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